

# The bbscp Script

## Category: File Transfers

### Introduction

The bbSCP script is written in Perl by Greg Matthews at NAS. It is a bbFTP wrapper which provides an `scp`-like command line interface; bbSCP only encrypts usernames and passwords, it does *not* encrypt the data being transferred.

### Downloading bbSCP

If you plan to initiate `bbscp` on your localhost, you have to [download bbSCP version 1.0.6](#) (also attached at the end of this article) and [download/install bbFTP client version 3.2.0](#) on your localhost.

The bbSCP script has been installed on Pleiades (version 1.0.4), Columbia (version 1.0.4), and Lou (version 1.0.6).

### Using bbSCP

Note that bbSCP is just a client-side wrapper for bbFTP, so, as with bbFTP, you must use the *fully-qualified domain name* of the target host (for example, `pfe1.nas.nasa.gov`) if you are not within the NAS domain.

The bbSCP version 1.0.6 man page provides details on how to use it.

```
BBSCP (1)                User Contributed Perl Documentation                BBSCP (1)
```

```
NAME
```

```
    bbscp - bbftp wrapper, provides an scp-like commandline interface
```

```
SYNOPSIS
```

```
    bbscp [OPTIONS] [[user@]host1:]file_or_dir1 [...] [[user@]host2:]dir2
```

```
DESCRIPTION
```

```
    bbscp does unencrypted copies of files either from the localhost to a
    directory on a remote host, or from a remote host to a directory on
    the localhost (see the -N option for the only exception to this). It
    assembles the proper commandline for bbftp (designed and tested for
    bbftp version 3.2.0, see RESTRICTIONS) and then executes bbftp to
    perform the transfer(s).
```

```
    The "-s", "-p 2", and "-r 1" options for bbftp are set by default,
```

along with the following options:

```
setoption keepaccess
setoption keepmode
setoption nocreatedir
```

The options `-p` and `-r` can be overridden on the commandline.

Note the following limitations and capabilities in different transfer scenarios:

copying from localhost to remote host

- regular files  
bbftp will overwrite a pre-existing file of the same name on the remote host without asking for confirmation.
- directories  
This script recursively transfers entire directories (only for local-to-remote transfers!).
- symbolic links (see RESTRICTIONS)  
Symlinks on the localhost are treated just like the thing they point to, and are ignored if they point to something that doesn't exist.

copying from remote host to localhost

- regular files  
bbftp will overwrite a pre-existing file of the same name on the localhost without asking for confirmation.
- directories  
There is no way at this time to transfer entire directories from a remote host to the localhost.
- symbolic links (see RESTRICTIONS)  
Symlinks on the remote host are treated just like the thing they point to (which means they are ignored if they point to a directory or to something that doesn't exist).

#### OUTPUT

The default output mode of the script displays "OK" or "FAILURE" for each of the transfer operations that bbftp performs. This display occurs after bbftp has finished running, so it may be delayed for some time depending on the duration of the transfer(s).

The script switches to more verbose output if the user provides 1 or more of the verbose output commandline options (`-l`, `-t`, `-V`, and `-W`).

#### OPTIONS

- B name/location of bbftp executable. default is "bbftp"
- d dry-run. script performs its duty but does not actually execute bbftp. the bbftp commandline is printed, along with the contents of the bbftp control-file
- h minimal help text

- k keep bbftp command file that this script creates
- l long-winded (extra verbose) output from bbftp. uses undocumented bbftp option (-d)
- N transfer a single file and rename it at the destination. both local-to-remote and remote-to-local transfer is supported. see RESTRICTIONS
- v version of this script
- X set the size of the TCP send window (in kilobytes). default is the bbftp default size
- Y set the size of the TCP receive window (in kilobytes). default is the bbftp default size
- z suppress the security disclaimer

bbftp options that can be specified on the commandline of this script:

- D[*min\_port:max\_port*] (e.g. "-D", "-D40000:40100")
- E <Server command to run>
- L <SSH command>
- p <number of parallel streams>
- R <bbftprc file>
- r <number of tries>
- t
- V
- W

## RESTRICTIONS

Version of bbftp

It's very important to use bbftp version 3.2.0 with bbscp -- there's at least 1 known issue with using bbftp 3.1.0.

Possible shell issues

bash and tcsh interpret commandline text in different ways, so you may need to use quotes or other delimiters to use bbscp. In particular, bash and tcsh are known to handle wildcards differently.

Wildcards

If the -N option is not in use, wildcards can be used in remote host file specifications, but only for the names of files, not for directories. So, for example, "user@host:/tmp/file\*" is acceptable, but "user@host:/tm\*/file\*" is not.

Symbolic links

Symlinks are not bbftp's strong suit -- if you wish to transfer a collection of files that includes symlinks it is highly recommended that you first make a tar-file and then transfer the tar-file.

Use of -N option

Wildcards are not supported in remote host file specifications w/ -N.

If the destination is a symlink it will be overwritten, regardless of what that symlink points to.

#### EXAMPLES

Note: these examples have been tested with bash, changes may be needed for them to work in tcsh (see RESTRICTIONS).

local file to remote directory (username must be the same on both machines)  
bbscp /u/username/data/file1 machine:target\_dir

local file to remote file w/ different name  
bbscp -N /u/username/data/file1 machine:file89

multiple local files to remote directory  
bbscp /u/username1/data/\*file username2@machine:/tmp

local directory to remote home directory  
bbscp /u/username1/data username2@machine:

remote file to local directory  
bbscp username1@machine:data/file5 /u/username2/source\_dir

remote file to local file w/ different name  
bbscp -N username1@machine:data/file5 /u/username2/source\_dir/file93

multiple remote files to local directory  
bbscp -V username1@machine:/u/username1/data/file\* /tmp

multiple remote files to local directory  
bbscp -V username1@machine:file1.txt username1@machine:stuff.dat /tmp

#### AUTHOR

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perl v5.8.8            2010-12-10        BBSCP (1)

## Performance Tuning

To find the transfer rate, turn on **-v** option.

Like bbFTP, the number of streams and TCP send/rcv window sizes affect performance. Users can set the number of streams through the **-p** option. Starting with bbSCP version 1.0.6, *the default is 2 streams*. To set the window sizes in KB, use the **-x** option for send window and **-y** for receive window. The default is the bbFTP default send/rcv window size.

For more information concerning test and verification of bbSCP, see the [Test and Verification](#) article.

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<http://www.nas.nasa.gov/hecc/support/kb/entry/235/?ajax=1>